

WHAT IS CLAIMED IS:

1. A pancreatic carcinoma-specific antigen 3C4-Ag in substantially purified form characterized by:

a molecular weight of about 43.5 kDa as determined by SDS-PAGE;

5 a pI on isoelectrofocusing of about 4.5 to about 5.0;

being unglycosylated or minimally glycosylated; and

being primarily localized on the surface of rat and human pancreatic cancer cells but not detected in normal, non-proliferating cells.

2. A soluble pancreatic carcinoma-specific antigen 3C4-Ag having a molecular weight of about 36 to about 38 kD as determined by SDS-PAGE and isolatable from sera and other bodily fluids of pancreatic cancer patients.

3. An immunologically active fragment of the pancreatic carcinoma-specific antigen 3C4-Ag of claim 1.

4. An antibody or binding portion thereof, having binding specificity to pancreatic carcinoma specific antigen 3C4-Ag, wherein said antigen is characterized by:

a molecular weight of about 43 kDa as determined by SDS-PAGE;

a pI on isoelectrofocusing of about 4.5 to about 5.0;

being unglycosylated or minimally glycosylated; and

being primarily localized on the surface of rat and human pancreatic cancer cells but not detected in normal, non-proliferating cells.

5. The antibody of binding portion thereof, of claim 4 which also binds to a soluble pancreatic carcinoma-specific antigen having a molecular weight of about 36 to

about 38 kD as determined by SDS-PAGE and isolatable from sera and other bodily fluids of pancreatic cancer patients.

6. The antibody of Claim 4 or 5 which is a polyclonal antibody.

7. The antibody of claim 4 or 5 which is a monoclonal antibody.

5 8. A murine hybridoma cell line which produces a monoclonal antibody specifically immunoreactive with the 3C4-Ag antigen of Claim 1 or 2.

9. A murine hybridoma cell line which produces the monoclonal antibody of Claim 4.

10 10. A monoclonal antibody, mAb34C, secreted by the hybridoma cell line of Claim 9.

11. The monoclonal antibody mAb3C4 of claim 7 or 10 in a humanized form.

12. An antibody according to claim 4 or 5 wherein the antibody is labeled with a fluorophore, chemilophore, chemiluminescer, photosensitizer, suspended particles, radioisotope or enzyme.

15 13. An antibody according to claim 10 wherein the antibody is labeled with a fluorophore, chemilophore, chemiluminescer, photosensitizer, suspended particles, radioisotope or enzyme.

14. An antibody according to claim 4 or 5 wherein the antibody is conjugated or linked to a therapeutic drug or toxin.

20 15. The antibody of claim 14 wherein the therapeutic drug or toxin is a peptide at least about six contiguous amino acids of the amino sequence set forth in SEQ PPLSQETFSDLWKLL (SEQ ID NO:1) or an analog or derivative thereof.

16. The antibody of claim 15 wherein the penetratin sequence from *antennapedia* protein having the amino acid sequence KKWKMRNQNQFWVKVQRG (SEQ ID NO:4) is positioned at the carboxy terminal end of the peptide.

17. An antibody according to claim 10 wherein the antibody is conjugated or
5 linked to a therapeutic drug or toxin.

18. A method of detecting pancreatic cancer in an animal subject, said method comprising the steps of:

- (a) contacting a cell, tissue or fluid sample from the subject with at least one of an antibody or binding portion thereof which specifically binds to 3C4-Ag or an
10 immunologically active fragment thereof; the monoclonal antibody mAb34C; or an antibody which binds the epitope bound by the monoclonal antibody mAb34C; under conditions permitting said antibody to specifically bind an antigen in the sample to form an antibody-antigen complex;
- (b) detecting antibody-antigen complex in the sample; and
- 15 (c) correlating the detection of elevated levels of antibody-antigen complex in the sample with the presence of pancreatic cancer.

19. A diagnostic kit suitable for detecting 3C4-Ag in a cell, tissue, or fluid sample from a patient; said kit comprising:

- (a) an antibody or binding portion thereof which specifically binds 3C4-Ag or an
20 immunologically active fragment thereof;
- (b) a conjugate of a specific binding partner for the antibody or binding portion thereof; and

(c) a label for detecting the bound antibody.

20. A method of treating pancreatic cancer in a patient suffering therefrom which comprises administering to the patient an effective amount of an antibody or binding portion thereof which specifically binds to 3C4-Ag or an immunologically active fragment thereof, wherein said antibody or binding portion thereof is conjugated or linked to a
5 therapeutic drug or toxin.

21. The method of claim 20 wherein said antibody is mAb3C4.

22. The method of claim 20 or 21 wherein the therapeutic drug or toxin is a peptide of at least about six contiguous amino acids of the amino sequence set forth in
10 SEQ PPLSQETFSDLWKLL (SEQ ID NO:1) or an analog or derivative thereof.

23. A pharmaceutical composition comprising an antibody or binding portion thereof which specifically binds to 3C4-Ag, admixed with a pharmaceutically acceptable carrier.

24. The pharmaceutical composition of claim 23 wherein the antibody or
15 binding portion thereof which specifically binds to 3C4-Ag is conjugated or linked to a therapeutic drug or toxin.